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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,344	08/01/2003	Georg G.A. Bohm	P01004US2A(P314)	3592

7590 03/24/2006

Chief Intellectual Property Counsel  
Bridgestone Americas Holding, Inc.  
1200 Firestone Parkway  
Akron, OH 44317-0001

EXAMINER

RABAGO, ROBERTO

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	Application No. 10/632,344	Applicant(s) BOHM ET AL.	
	Examiner Roberto Rábago	Art Unit 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 December 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 6-8, 10, 11 and 20-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-8, 10, 11, 20-29 and 31-37 is/are rejected.
- 7) ☒ Claim(s) 30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. Claims 25-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are indefinite in because they do not state the basis for the molecular weight (i.e.,  $M_w$ ,  $M_n$  or  $M_z$ ).

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 6-8, 20-23, 29 and 31-37 rejected under 35 U.S.C. 102(b) as being anticipated by Knauss (US 6,255,424).

The reference discloses the making of dendritic polymers comprising preparing living polymer segments, linking said segments with a coupling agent, and further polymerizing additional monomer. Example 1 discloses the making of polystyrene segments using sec-butyl lithium. Example 6 further describes that following addition of vinyl benzylchloride coupling agent, additional styrene is added which forms a linear

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chain from the dendritic structure. The overall structure is shown in figure 6, which is further explained at col. 17, lines 5-23. Although the reference has not reported the overall "molar deficiency" as required in the claims, the amount is stated to be less than 1, and would appear to be within the scope of applicants claimed range; Knauss states that the coupling agent reacts with more than one living polymer segment, and that the amount of coupling agent is carefully controlled to ensure a stoichiometric excess (col. 12, lines 28-35). The burden of proof is shifted to applicants to show that the exemplified polymers do not have the claimed molar deficiency.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 10, 11 and 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knauss (US 6,255,424).

The parent claims are discussed with respect to this reference above. Although unexemplified, the reference discloses other monomers suitable for the tail portion of the polymer, including dienes (col. 17, lines 19-23). One of ordinary skill in the art would immediately visualize at least the simplest dienes, such as butadiene. Further, the copolymerization of styrene and butadiene is otherwise so commonplace that the

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ordinary skilled worker would also envisage both of these comonomers. The reference also states that the initial anionic polymerization may include conjugated diene (col. 15, lines 18-25). Regarding claim 28, Example 1 discloses a polymer segment size of 500 g/mol; however, it is also stated that by trivial adjustments to reagent ratios, weights as high as 20,000 are easily attainable. Therefore, one of ordinary skill in the art would be motivated to use these alternative embodiments because patentee has suggested them as alternatives within the scope of the disclosure.

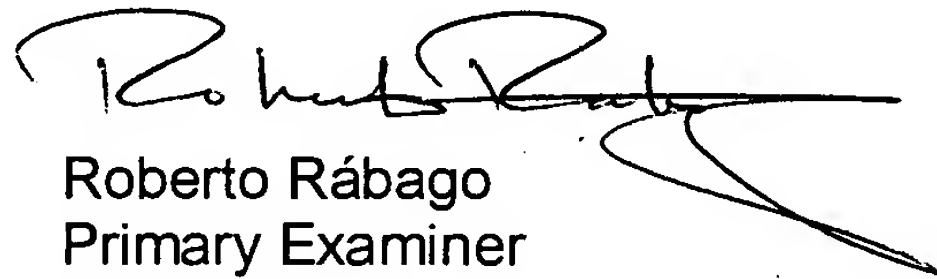
6. Claim 30 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Rábago whose telephone number is (571) 272-1109. The examiner can normally be reached on Monday - Friday from 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Roberto Rábago  
Primary Examiner  
Art Unit 1713

RR  
March 20, 2006